

Mr. Khai Dao
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Subject:
Univar USA Inc.
Coraopolis, PA
Work Plan for System Deactivation and Commencement of Post Remediation
Monitoring

ENVIRONMENT

Date:
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Our ref:
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Dear Mr. Dao:

Arcadis U.S., Inc. (Arcadis), on behalf of Univar USA Inc. (Univar), is writing to you to provide a simplified work plan (the plan) regarding modifications to the remedial strategy proposed to be undertaken at Univar's former facility located at 6000 Casteel Drive, Coraopolis, PA (the Site). As we discussed during our telephone call on May 31, 2016 and as I discussed with Paul Gotthold on May 30, 2016, Univar believes that the Site's 20-year-old groundwater and soil vapor remediation system has achieved its maximum remediation potential as evidenced through asymptotic mass removal rates, despite several attempts to optimize and upgrade performance over its lifetime. The intent of this work plan is to provide the United States Environmental Protection Agency (USEPA) with background information pertaining to remediation system operation and groundwater quality at the site, and to propose deactivation of the remediation system and commencement of a groundwater quality rebound and surface water monitoring program, to assess the potential for risk-based Site closure. Arcadis has also discussed this matter with the Pennsylvania Department of Environmental Protection (PADEP). Based upon conversations with both USEPA and PADEP (Troy Conrad and Dave Eberle), Arcadis has developed this proposed path of action.

The change in approach is being requested because the current regulatory endpoint for groundwater (USEPA Maximum Contaminant Levels) is believed to

be technically impractical to achieve. The Site has a USEPA Final Decision document and corresponding Environmental Covenant, both entered into during the 2012-2013 timeframe. It is our understanding that if residual impacts in soil and groundwater pose no unacceptable risk to receptors, and if the groundwater plume is stable, USEPA would plan to issue an Explanation of Significant Difference (ESD) to the Final Decision Document, modifying the regulatory endpoint through creation of a Technical Impracticability (TI) zone defined by the boundaries of the residually impacted area. The new regulatory endpoint would be Corrective Action Complete with Controls.

The following paragraphs provide information on:

- The Site's current regulatory status;
- A brief history of the Site and Site conditions;
- A summary of remedial measures and remedial progress to date;
- The rationale behind the request to deactivate the remediation system; and
- The proposed monitoring and contingency plans.

Current Regulatory Status

The Site is regulated by the USEPA as a Resource Conservation and Recovery Act (RCRA) 2020 facility. USEPA selected a Final Remedy for the Site in 2012 that is enforced through a PA Environmental Covenant issued in 2013. The Environmental Covenant, included as **Attachment A**, requires the following:

- *Operate and maintain the SVE system (until) sampling demonstrates that the PA Non-Residential Statewide Health Standards for subsurface soils are attained.*
- *Operate and maintain the existing groundwater treatment unit to ensure contaminant removal and hydraulic containment until COCs in groundwater meet drinking water standards, the MCLs promulgated at 40 C.F.R. Part 141, pursuant to Section 1412 of the Safe Drinking Water Act., 42 U.S.C. Section 300g-I, or until USEPA determines that groundwater contaminant reduction to MCLs is technically impractical.*

Summary of Site Operational History

The approximately 2.5-acre Site operated as a chemical distribution center from 1964 – 2002, at which time all operations that would be regulated under RCRA, ceased. Univar currently leases the Site to Walker Supply, Inc., a distributor of landscaping products.

The following is a summary of the Site operational and environmental investigation history:

- **1964:** McKesson Chemical Company began operating a solvent distribution service center; chemicals were stored in 10 aboveground storage tanks (ASTs)
- **1988:** McKesson obtains a hazardous waste storage permit from PADEP that allows spent solvents from offsite sources to be stored onsite; note that there is no record that such a hazardous waste storage area ever was created or utilized
- **1989:** Univar (Van Waters and Rogers Inc. at the time) purchases the Site

- **1990:** Univar notified PADEP that contaminated soils were discovered and a four-phase environmental assessment was performed
- **1992:** Groundwater monitoring began
- **1999:** USEPA performed an Environmental Impact Summary
- **2002:** Univar closes the solvent distribution service operation; the 10 ASTs were decommissioned and removed
- **2003-2004:** Additional site characterization was performed.

Site Geologic and Hydrogeologic Conditions, and Receptors

The Site is located in a narrowly and deeply incised valley through which Montour Run flows, with land surface both north and south rising approximately 200-300 feet above the valley floor. Subsurface investigations in the approximate 0.16-acre impacted area have identified that predominantly low permeability unconsolidated sediments (silt and clay) comprise the saturated zone overlying bedrock. Groundwater elevation data indicate that an upward vertical hydraulic gradient is present beneath the Site, which is to be expected given the high topographic relief in the area.

Montour Run is located approximately 300 feet north of the Site. Historical sampling of Montour Run both upstream and downstream of the Site yielded no detections of the contaminants of concern (COCs) related to the Site. The stream is classified as an aquatic life protected use category under the Clean Streams Act. Historically, the Montour Run watershed has been monitored by the PADEP due to acid mine drainage and airport de-icer pollution, as well as high daily sedimentation loads.

The Pennsylvania Department of Conservation and Natural Resources (PA DCNR) Groundwater Information System (PaGWIS) lists no potable water wells within a one-mile radius of the Site.

The area surrounding the Site is not listed in the US Fish and Wildlife National Wetlands Inventory. The nearest downstream wetland located along Montour Run is approximately 3,000 feet from the Site.

Site Remediation Summary

The following actions have been taken to address impacts to soil and groundwater by chlorinated and non-chlorinated volatile organic chemicals (VOCs, which are the Site COCs) identified on the Site beneath and up to 50 feet downgradient of the former AST area:

- **1990:** Approximately 1,500 yards of soil were excavated from the Site.
- **1991:** Two 6-foot-deep SVE trenches were installed and a pilot SVE system was operated for approximately one year (est. \$50,000).
- **1996:** Four extraction wells (EW-1 through EW-4) and a permanent groundwater pump and treat system were installed (est. \$100,000).
- **2004:** The treatment system was expanded to include two new SVE trenches and six additional extraction wells (EW-5 through EW-10) capable of groundwater and soil vapor extraction (est. \$125,000).
- **2012:** USEPA Final Decision document issued.

- **2013:** PA Environmental Covenant filed in the land records.
- **2014:** SVE system optimization pilot test performed.
- **2015:** System controls updated in 2015 (\$25,000).

Table 1 and **Figure 1** provide information related to the remedial systems' performance (i.e., COC mass removal) and relative cost to operate over time. The data indicate that there has been an approximate five-fold increase over time in the cost to remove one pound of VOCs from the subsurface at the Site. **Figure 2** illustrates the approximate 30' x 120' impacted area.

Rationale for Request to Deactivate the System and Commence Post-Remediation Groundwater Monitoring

There are several factors which, when combined, indicate that the current regulatory endpoint for groundwater, USEPA MCLs, is likely not achievable in any reasonable period of time and, in addition, there is no risk-based reason to pursue such an endpoint for the Site. These include:

- The plume, even before remediation began, never extended more than 50 - 60 feet downgradient from the former AST area. The limited extent of impacts is likely due to the very low permeability of the saturated-zone subsurface materials into which the releases occurred.
- The principal mechanism by which COCs will continue to mobilize from the low permeability sediments beneath the Site is diffusion, which is a very slow (decades to centuries) process.
- There is an upward vertical gradient in the saturated zone materials below the Site that prevents downward migration.
- There have been no impacts to surface water quality related to the Site.
- There are no receptors in the vicinity of the Site, other than Montour Run (potential receptor), which has not become impacted.

Proposed Monitoring Plan

Based on site information provided in this letter and technically impractical regulatory endpoints, it is proposed that the remediation system at 6000 Casteel Drive, Coraopolis, Pennsylvania be shut down as soon as practicable to commence groundwater and stream monitoring in an effort to evaluate site conditions absent active remedial measures. Following system deactivation, Arcadis proposes, at a minimum, eight consecutive quarters of post-remediation monitoring in order to establish stable or decreasing concentration trends for Site COCs. Additional monitoring events may be warranted should decreasing or stable trends not be confirmed within the first 8 quarters. Each monitoring event will include measuring depths to groundwater in all site monitoring wells, and collecting groundwater samples from MW-1 through MW-5, and MW-8. Samples will be collected from MW-6 semi-annually, as this well is upgradient of the impacted area and has historically either not contained Site COCs or their concentrations have been below criteria. In addition, three stream samples will be collected from Montour Run. The stream sampling locations will include the location that is inferred as the entry point of potential groundwater infiltration to the stream, a location considered upgradient of the inferred infiltration point, and a location considered downgradient of the inferred infiltration point but prior to any other potential discharges to the stream that may impact surface water quality. Samples will be collected from the

stream on a quarterly basis. All samples will be submitted to a certified laboratory for analysis of VOCs via USEPA Method 624.

Contingency Plan

Over the approximate 20-year history of remediation of both groundwater and soil vapor plumes at the Site, COC concentrations in groundwater have decreased between 3 to 5 orders of magnitude in key plume monitoring wells. Thus, the rebound study will evaluate the effectiveness of the active remedies in achieving improvement in groundwater quality in the affected water-bearing strata. Completion of the rebound study is critical to evaluating; 1) the extent to which the groundwater has been remediated via the current system; 2) the residual levels of COCs that remain in the absence of active pumping; and whether additional delineation of impacts or additional active remediation are warranted or could be effective, given the low permeability of the geologic materials below the Site. Because no receptors other than Montour Run have been identified, and because Montour run water quality will be tested over the duration of the rebound study, a contingency plan to restart the remediation system has not been developed at the present time, although the remediation system will remain on site and will be available for reactivation should it be deemed necessary.

An evaluation of groundwater and stream quality will be performed following each monitoring event. A summary of the results of each quarterly monitoring event, via phone call or an email communication, will be shared with the USEPA to review trends and to determine if an alternate course of action should be considered based on the results. Arcadis will provide immediate notification to the USEPA should the concentrations in any surface water sample exceed the National Recommended Water Quality Criteria for Human Health. Semi-annual reports will continue to be submitted presenting the results of the monitoring events.

We would like to shut down the remediation system and begin the rebound study in Q3 2016, so would appreciate your prompt review of the plan. We look forward to your approval of the plan, or to discussing the scope of the proposed actions with you further once you have had a chance to review the information provided, if necessary.

Sincerely,

Arcadis U.S., Inc.



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